In the Claims

Please replace the currently pending set of claims with the set of claims set forth below without prejudice under the provisions of 37 C.F.R. § 1.121:

44. (Previously presented) An isolated nucleic acid comprising: a first ribonucleotide (RNA) sequence of greater than 20 consecutive nucleotides which is identical in sequence to a region of a transcript of a target gene in a eukaryotic cell, ~~and~~

a second RNA sequence which is complementary to said first RNA sequence, and

an intron,

wherein the first and second RNA sequences are in the same nucleic acid strand and are separated by a stuffer fragment which comprises a sequence of nucleotides.

45-76. (Cancelled)

77. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a viral gene.

78. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a nucleotide sequence of a viral pathogen of a plant.

79. (Previously presented) The nucleic acid molecule of claim 78, wherein the viral pathogen is a potyvirus, caulimovirus, badnavirus, geminivirus, reovirus, rhabdovirus, Bunyavirus, tospovirus, tenuivirus, tombusvirus, luteovirus, sobemovirus, bromovirus, cucomovirus, ilavirus, alfamovirus, tobamovirus, tobravirus, potexvirus or clostrovirus.

80. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a nucleotide sequence of a viral pathogen of an animal cell.

81. (Previously presented) The nucleic acid molecule of claim 80, wherein the viral pathogen is a retrovirus.

82. (Previously presented) The nucleic acid molecule of claim 80, wherein the viral pathogen is an immuno deficiency virus.

83. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a nucleotide sequence of a single-stranded (+) RNA virus.

84. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a nucleotide sequence of a double-stranded DNA virus.

85. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a transgene in the eukaryotic cell.

86. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is a member of a multigene family in the eukaryotic cell.

87. (Previously presented) The nucleic acid molecule of claim 44, wherein the target gene is an endogenous gene of the eukaryotic cell.

88. (Previously presented) The nucleic acid molecule of claim 44, wherein the eukaryotic cell is a plant cell.

89. (Previously presented) The nucleic acid molecule of claim 88, wherein the plant is a monocotyledonous plant of a dicotyledonous plant.

90. (Previously presented) The nucleic acid molecule of claim 44, wherein the eukaryotic cell is an animal cell.

91. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is a vertebrate animal.

92. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is an invertebrate animal.

93. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is an aquatic animal.

94. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is an insect.

95. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is a fish.

96. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is an avian animal.

97. (Previously presented) The nucleic acid molecule of claim 90, wherein the animal is a mammal.

98. (Previously presented) The nucleic acid molecule of claim 44, wherein the eukaryotic cell is a human cell.

99. (Previously presented) The nucleic acid molecule of claim 44, wherein the region of the transcript corresponds to coding regions of the target gene.

100. (Previously presented) The nucleic acid molecule of claim 44, wherein the region of the transcript corresponds to a 5'-or 3'-untranslated sequence of the target gene.

101. (Cancelled)

102. (Previously presented) The nucleic acid molecule of claim 44, wherein the stuffer fragment is a sequence of nucleotides 10-15 nucleotides in length, 50-100 nucleotides in length, or 100-500 nucleotides in length.

103. (Cancelled)

104. (Previously presented) The nucleic acid molecule of claim 44, wherein the total length of the nucleic acid molecules is no more than 2.0 kilobases.

105. (Previously presented) The nucleic acid molecule of claim 104, wherein the total length of the nucleic acid molecule is no more than 0.5 kilobases.

106. (Previously presented) The nucleic acid molecule of claim 44, which is naked RNA.

107. (Previously presented) The nucleic acid molecule of claim 44, which is encapsulated in a liposome.

108. (Previously presented) The nucleic acid molecule of claim 44, which is in a virus particle which is an attenuated virus or associated with a virus coat.

109. (Previously presented) The nucleic acid molecule of claim 44, which is comprised in a recombinant viral vector.

110. (Previously presented) The nucleic acid molecule of claim 44, which is in a cell.

111. (Previously presented) A composition comprising a carrier, excipient or diluent acceptable for human or veterinary applications and the nucleic acid molecule of claim 44.

112. (Previously presented) A synthetic construct comprising a promoter which is operable in a eukaryotic cell, operably linked to a nucleotide sequence encoding the nucleic acid molecule of claim 44.

113. (Previously presented) The synthetic genetic construct of claim 112, which is in a eukaryotic cell.

114. (Currently Amended; Withdrawn) A eukaryotic cell comprising a non-endogenous nucleic acid molecule comprising a first ribonucleotide (RNA) sequence of greater than 20 consecutive nucleotides which is identical in sequence to a region of a transcript of a target gene in the eukaryotic cell, ~~and~~

a second RNA sequence which is complementary to said first RNA sequence, and

an intron,

wherein the first and the second RNA sequences are in the same nucleic acid strand and are separated by a stuffer fragment which comprises a sequence of nucleotides.

115. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, which is a multicellular plant cell.

116. (Previously presented; Withdrawn) The eukaryotic cell of claim 115, which is a monocotyledonous plant cell or a dicotyledonous plant cell.

117. (Previously presented; Withdrawn) The eukaryotic cell of claim 115, which is a transgenic plant.

118. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, which is an animal cell.

119. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is a vertebrate animal.

120. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is an invertebrate animal.

121. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is an aquatic animal.

122. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is an insect.

123. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is a fish.

124. (Previously presented; Withdrawn) The eukaryotic cell of claim 118, wherein the animal is a bird.

125. (Previously presented) The eukaryotic cell of claim 118, wherein the animal is a mammal.

126. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the eukaryotic cell is a human cell.

127. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the eukaryotic cell is a somatic cell.

128. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the eukaryotic cell is a haematopoietic stem cell.

129. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the eukaryotic cell is a T-cell.

130. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the eukaryotic cell is in tissue culture.

131. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the nucleic acid molecule is present as an extrachromosomal nucleic acid.

132. (Previously presented; Withdrawn) The eukaryotic cell of claim 114, wherein the nucleic acid molecule is produced in the cell by transcription of a synthetic gene comprising a promoter that is functional in the eukaryotic cell operably connected to a nucleotide sequence encoding the nucleic acid molecule.

133. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the promoter is heterologous with respect to the nucleotide sequence encoding the first RNA sequence.

134. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the promoter is capable of functioning in an animal cell.

135. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the promoter is a constitute promoter.

136. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the promoter is an inducible promoter.

137. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the promoter responds to external stimuli.

138. (Previously presented; Withdrawn) The eukaryotic cell of claim 132, wherein the synthetic gene further comprises a transcription terminator sequence.

139. (Previously presented; Withdrawn) The eukaryotic cell of claim 117, wherein the transgenic plant has a reduced level of expression of the target gene.

140. (Previously presented; Withdrawn) The eukaryotic cell of claim 117, wherein the transgenic plant exhibits virus resistance.

141. (Previously presented; Withdrawn) The eukaryotic cell of claim 139, wherein the target gene is an endogenous gene.